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ABSTRACT

This study examined the degree to which adolescent self-system processes (self-efficacy, emotional reactivity) and reports of mothers' and fathers' behavior (warmth/support, hostility) predict adolescents' behavior toward siblings and their friends' problem behavior. Subjects were 76 seventh-grade adolescents who provided self-reports of parent behavior, self-system processes, and the criterion variables. Findings indicated that mothers' and fathers' warm/supportive and hostile behaviors were significant predictors of teens' behavior toward siblings. In addition, emotional reactivity and self-efficacy each made a unique contribution to the prediction of teens' hostile and warm/supportive behavior toward siblings. The combination of parent behavior and teens' self-system processes predicted 26-29 percent of the variance in teens' behavior toward siblings. The addition of parent behaviors to the model significantly enhanced the prediction of teens' behavior toward siblings beyond that afforded by self-system processes. This suggests that mediation of parent behavior through teens' self-system processes does not fully explain the pathways by which the quality of parent behavior influences similar qualities in teens' relationships with their siblings. Fathers' hostile behavior was the most salient parent behavior in the prediction of teens' reports of their friends problem behavior, and continued to make a unique contribution to this prediction when combined with teens' self-system processes. These findings are consistent with previous research that suggests that mother-teen and father-teen relationships may have unique effects on adolescents' development. (Author/KB)

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**Parent Behavior and Adolescents' Self-System Processes:
Predictors of Behavior to Siblings and Friends Problem Behavior**

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ABSTRACT

This study examines the degree to which adolescent self-system processes (i.e., self-efficacy, emotional reactivity) and reports of mothers' and fathers' behavior (i.e., warmth/support, hostility) uniquely, and in combination, predict adolescents' behavior toward siblings and their friends' problem behavior. 76 seventh-grade adolescents provided self-reports of parent behavior, self-system processes and the criterion variables. Mothers' and fathers' warm/supportive and hostile behavior were significant predictors of teens' behavior toward siblings. In addition, emotional reactivity and self-efficacy each made a unique contribution to the prediction of teens' hostile and warm/supportive behavior toward siblings. The combination of parent behavior and teens' self-system processes predicted 26-29% of the variance in teens' behavior toward siblings. The addition of parent behaviors to the model significantly enhanced the prediction of teens' behavior toward siblings beyond that afforded by self-system processes. This suggests that mediation of parent behavior through teens' self-system processes does not fully explain the pathways by which the quality of parent behavior influences similar qualities in teens' relationships with their siblings. Fathers' hostile behavior was the most salient parent behavior in the prediction of teens' reports of their friends problem behavior, and continued to make a unique contribution to this prediction when combined with teens' self-system processes. These findings are consistent with previous research that suggestions that mother-teen and father-teen relationships may have unique effects on adolescents' development.

INTRODUCTION

Relationships with parents serve as important developmental contexts. For example, global categories of parenting behavior (i.e., styles) have been used to explain variations in patterns of adolescent development, including academic achievement, psychosocial development, behavior problems, and psychological symptoms (e.g., Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). In addition, more discrete aspects of parent behavior (e.g., warmth, communication, hostility) have been linked to such adolescent outcomes as psychosocial development, self-esteem, problem behaviors, and academic performance (e.g., Brooks-Gunn & Ruble, 1982; Dishion, Patterson, Stoolmiller, & Skinner, 1991; Eccles & Harold, 1993; Repinski, 1993). Further, associations have been reported between adolescent self-system processes and outcomes such as delinquency, academic performance and chemical use (Cloninger, 1991; Feldman & Weinberger, 1994). A critical issue not addressed by many of these studies concerns the degree to which adolescent self-system processes (i.e., self-efficacy, emotional reactivity) and reports of mothers' and fathers' behavior (i.e., warmth/support, hostility) uniquely, and in combination, predict adolescents' behavior toward siblings and their friends' problem behavior.

METHOD

PARTICIPANTS

- 76 seventh grade adolescents (41 males and 35 females)
- Participants were from European-American, primarily middle-class families with two biological parents, living in a rural midwestern community.

MEASURES

Predictor Variables

Parent Behavior

Warm/Supportive: 7 items tapping behavior which expressed affection toward, appreciation of, or interest in the adolescent (e.g., parent is loving and affectionate toward adolescent; parent lets the teen know he/she really cares about him/her; listens carefully to the adolescents' point of view)

Hostile: 11 items tapping behavior which was critical of the adolescent and included displays of anger, negative affect, and coercion (e.g., parent gets angry with adolescent; parent shouts or yells at adolescent because he/she was mad at the teen; parent hit, pushed, grabbed, or shoved the adolescent)

Adolescents' Self-System Processes

Emotional Reactivity: 5 items assessing the frequency of adolescents' aggressive or dominant behavior (e.g., if someone hits me first, I let them have it; when I get mad I say nasty things)

Self-Efficacy: 14 items assessing personality characteristics indicative of psychosocial competence (e.g., confident; adaptable; and assertive)

Criterion Variables

Behavior to Sibling

Warm/Supportive: adapted from above

Hostile: adapted from above

Friends' Problem Behavior: 12 items tapped the use of "gateway" chemicals by adolescents' friends and their involvement in minor delinquent behavior (e.g., "These friends sometimes break the law.")

PROCEDURE

- Data was drawn from a pilot study of an on-going investigation (e.g., Conger, Simons, & Whitbeck) of individual and family development in the rural Midwest.
- Self-report questionnaire data was collected in the families' homes (families were compensated for participation).
- Participants provided reports of parent behavior, self-system processes, and the criterion variables.

RESULTS

CORRELATIONAL ANALYSES

- ◆ Significant associations were found among reports of parents' behavior (warm/supportive and hostile), teens' self-system processes, behaviors toward siblings (warm/supportive and hostile) and reports of friends' problem behavior (see Table 1).
- ◆ Mothers' and fathers' warm/supportive behavior were significant positive correlates of teens' warm/supportive behavior ($r=.37, p\leq .001$; $r=.53, p\leq .001$, respectively) and significant negative correlates of teens' hostile behavior ($r=-.22, p\leq .10$; $r=-.35, p\leq .01$, respectively) toward siblings.
- ◆ Mothers' and fathers' hostile behavior were negative correlates of teens' warm/supportive behavior ($r=-.20, p\leq .10$; $r=-.23, p\leq .05$, respectively) and significant positive correlates of teens' hostile behavior ($r=.47, p\leq .001$; $r=.46, p\leq .001$, respectively) toward siblings.
- ◆ Teens' self-efficacy was positively correlated with teens' warm/supportive behavior ($r=.32, p\leq .01$) and negatively correlated with teens' hostile behavior ($r=-.22, p\leq .10$) toward their siblings.
- ◆ Teens' emotional reactivity was negatively correlated with teens' warm/supportive behavior ($r=-.21, p\leq .10$) and positively correlated with teens' hostile behavior ($r=.40, p\leq .001$) toward their siblings.
- ◆ Mothers' and fathers' warm/supportive behavior were significant, negative correlates of teens' reports of their friends' problem behavior ($r=-.29, p\leq .01$; $r=-.32, p\leq .01$, respectively).
- ◆ Mothers' and fathers' hostile behavior were significant, positive correlates of teens' reports of their friends' problem behavior ($r=.47, p\leq .001$; $r=.49, p\leq .001$, respectively).
- ◆ Teens' emotional reactivity was positively associated with teens' reports of their friends' problem behavior ($r=.32, p\leq .01$), whereas teens' self-efficacy was not significantly correlated with reports of friends' problem behavior.

REGRESSION ANALYSES

Plan of Analyses

- ◆ Consistent, significant associations among mothers' and fathers' behavior, teens' self-system processes, behaviors toward siblings and reports of friends' problem behavior supported further investigation through regression models.
- ◆ Hierarchical regression models were used to evaluate the relative contributions of parents' behavior and adolescents' self-system processes to the prediction of adolescents' behavior toward a sibling and reports of their friends' problem behavior.

Prediction of Teens' Warm/Supportive Behavior Toward Siblings

- ◆ Teens' reports of mothers' and fathers' behavior predicted 25% (adjusted $R^2, p\leq .01$) of the variance in teens' warm/supportive behavior toward siblings.
 - ◆ Fathers' warm/supportive behavior made a significant unique contribution to this model ($\beta=.47, p\leq .001$).
- ◆ Teens' self-efficacy and emotional reactivity significantly predicted 12% (adjusted $R^2, p\leq .01$) of the variance in teens' warm/supportive behavior toward their siblings.
 - ◆ Teens' self-efficacy made a unique contribution ($\beta=.32, p\leq .01$) and emotional reactivity made a marginally significant contribution to this prediction ($\beta=-.20, p< .10$).

- ◆ In combination, parents' behavior and teens' self-system processes predicted 26% (adjusted R^2 , $p \leq .001$) of the variance in teens' warm/supportive behavior toward their siblings (see Table 2).
- ◆ The addition of parents' behavior enhanced the prediction of teens' warm/supportive behavior toward siblings, beyond that afforded by self-system processes, by 18% ($p \leq .01$).
- ◆ Fathers' warm/supportive behavior made the only significant, unique contribution to this model ($\beta = .48$, $p \leq .001$).

Prediction of Teens' Hostile Behavior Toward Siblings

- ◆ Teens' reports of mothers' and fathers' behavior predicted 23% (adjusted R^2 , $p \leq .001$) of the variance in teens' hostile behavior toward their siblings.
 - ◆ Mothers' hostile behavior made a marginally significant, unique contribution to this model ($\beta = .31$, $p \leq .10$).
- ◆ Teens' self-efficacy and emotional reactivity significantly predicted 18% (adjusted R^2 , $p \leq .001$) of the variance in teens' hostile behavior toward their siblings.
 - ◆ Teens' emotional reactivity and self-efficacy each made a unique contribution to this prediction ($\beta = .40$, $p \leq .001$; $\beta = -.21$, $p \leq .05$).
- ◆ In combination, reports of parents' behavior and teens' self-system processes predicted 29% (adjusted R^2 , $p \leq .001$) of the variance in teens' hostile behavior toward a sibling.
 - ◆ The addition of parents' behavior to the model significantly enhanced the prediction of hostile behavior toward a sibling, beyond that explained by self-system processes, by 14% ($p \leq .01$).
 - ◆ Teens' emotional reactivity ($\beta = -.28$, $p \leq .01$) and mothers' hostile behavior ($\beta = .30$, $p \leq .10$) each made unique contributions to this model.

Prediction of Friends' Problem Behavior

- ◆ Teens' reports of mothers' and fathers' behavior predicted 24% (adjusted R^2 , $p \leq .001$) of the variance in teens' reports of their friends' problem behavior.
 - ◆ Fathers' hostile behavior made a significant, unique contribution to this model ($\beta = .33$, $p \leq .05$).
- ◆ Teens' emotional reactivity significantly predicted 9% (adjusted R^2 , $p \leq .01$) of the variance in teens' hostile behavior toward their siblings.
- ◆ In combination, reports of parents' behavior and teens' emotional reactivity predicted 26% (adjusted R^2 , $p \leq .001$) of the variance in teens' reports of their friends' problem behavior.
 - ◆ The addition of parent behavior enhanced the prediction of friends' problem behavior, beyond that explained by self-system processes, by 20% ($p \leq .001$).
 - ◆ Fathers' hostile behavior ($\beta = .30$, $p \leq .10$) made a marginally significant, unique contribution to this model.

DISCUSSION

- ◆ Supporting the position that parent behavior has a prominent influence on the nature of teens' relationships with their siblings (e.g., Conger, Conger, & Elder, 1994), mothers' and fathers' warm/supportive and hostile behavior were significant predictors of teens' behavior toward siblings. These associations suggest pathways whereby parents' warm/supportive behavior toward teens may provide a springboard to similar interactional patterns with siblings and thus afford an additional source of support for teens. Conversely, parents' hostility may both weaken a critical

source of social support for teens, as well as exacerbate their risk for social incompetence by perpetuating a hostile interaction style with siblings.

- Considered in combination, emotional reactivity and self-efficacy each made a unique contribution to the prediction of teens' hostile and warm/supportive behavior toward siblings. This suggests that these self-system processes are important self-regulatory capacities that influence positive and negative aspects of sibling interaction. Emotional reactivity was a stronger, unique predictor of teens' hostile behavior, whereas self-efficacy was a stronger, unique predictor of warm/supportive behavior toward siblings. These results suggest that a relative inability to modulate emotional impulses may result in a hostile interactional style that increases risk for social maladjustment. Conversely, a sense of mastery and social effectiveness enhances teens' ability to interact with siblings in warm/supportive ways and thus affords an important source of social and emotional support.
- The combination of parent behavior and teens' self-system processes predicted 26-29% of the variance in teens' behavior toward siblings. Whether predicting warm/supportive or hostile sibling interactions, the addition of parent behaviors to the model significantly enhanced the prediction of teens' behavior toward siblings, beyond that afforded by self-system processes (by 14-18%). The continued, unique ability of parent behavior to predict the quality of teens' sibling relationships suggests that mediation of parent behavior through teens' self-reported emotional reactivity and self-efficacy does not fully explain the pathways by which the quality of parent behavior influences similar qualities in teens' relationships with their siblings.
- When parent behavior was considered in combination with self-system processes, fathers' warm/supportive behavior remained a unique predictor of teens' warm/supportive sibling behavior, whereas mothers' hostile behavior and teens' emotional reactivity remained unique predictors of teens' hostile behavior toward siblings. Moreover, fathers' hostile behavior was the most salient parent behavior in the prediction of teens' reports of their friends' problem behavior, and continued to make a unique contribution to this prediction when combined with teens' self-system processes. These results are consistent with empirical evidence that suggests mother-teen and father-teen relationships may have unique effects on teens' sibling relationships. For example, the father-teen relationship is particularly influential in its impact on cooperative sibling relationships (e.g., Volling & Belsky, 1992). Similarly, mothers' hostility is a particularly salient model for interactions, which may generalize to sibling relationships (e.g., Bryant & Crockenberg, 1980; Patterson, 1986). In addition, mothers' hostility may serve as a marker for more pervasively dysfunctional patterns within the family.
- Although the cross-sectional nature of the data merits cautious interpretation, the consistent pattern of findings suggests that an ecologically valid profile of the determinants of teens' social adjustment must simultaneously consider the additive, multiplicative, and reciprocal influences of teens' relationships with parents and siblings.

Table 1: Descriptive Statistics and Intercorrelations for the Study Variables

	1	2	3	4	5	6	7	8	Mean	SD
1. Mothers' Warm/Supportive Behavior									26.09	5.00
2. Mothers' Hostile Behavior	-.51***								20.70	7.22
3. Fathers' Warm/Supportive Behavior	.61***	-.45***							25.36	5.83
4. Fathers' Hostile Behavior	-.28*	.72***	-.43***						18.45	6.58
5. Self-Efficacy	.37***	-.23*	.34**	-.23*					52.46	7.25
6. Emotional Reactivity	-.19+	.29**	-.19+	.31**	-.04				14.70	4.30
7. Warm/Supportive Behavior Toward Sibling	.37***	-.20+	.53***	-.23*	.32**	-.21+			18.83	5.22
8. Hostile Behavior Toward Sibling	-.22+	.47***	-.35**	.46***	-.22+	.40***	-.34**		13.55	5.70
9. Friends' Problem Behavior	-.29**	.47***	-.32**	.49***	-.15	.32**	-.30**	.24*	21.68	6.88

Note: decimal points are omitted

- + = $p \leq .10$
- * = $p \leq .05$
- ** = $p \leq .01$
- *** = $p \leq .001$

Table 2: Standardized Regression Coefficients for Predicting Adolescents' Behavior to Siblings and Friends' Problem Behavior from Parent Behavior and Adolescent Self-System Processes

Predictors	Warm/Supportive Behavior to Sibling		Hostile Behavior to Sibling		Friends' Problem Behavior	
	β	Adjusted R^2	β	Adjusted R^2	β	Adjusted R^2
1. <u>Parents' Behavior</u>		.25**		.23***		.24***
Mothers' Warm/Supportive Behavior	.13		.11		-.08	
Mothers' Hostile Behavior	.15		.31+		.16	
Fathers' Warm/Supportive Behavior	.47***		-.20		-.07	
Fathers' Hostile Behavior	.10		.18		.33*	
2. <u>Adolescent Self-System Processes</u>		.12**		.18***		.09**
Self-Efficacy	.32**		-.21*		---	
Emotional Reactivity	-.20+		.40***		.32**	
3. <u>Adolescent Self-System Processes</u>		.26***		.29***		.26***
Self-Efficacy	.17		-.12		---	
Emotional Reactivity	-.13		.28**		.17	
<u>Parents' Behavior</u>						
Mothers' Warm/Supportive Behavior	.07		.16		-.07	
Mothers' Hostile Behavior	.14		.30+		.14	
Fathers' Warm/Supportive Behavior	.48***		-.18		-.06	
Fathers' Hostile Behavior	-.05	$R^2 \Delta = .18^{**}$	.10	$R^2 \Delta = .14^{**}$	.30+	$R^2 \Delta = .20^{***}$

Note: + = $p < .10$; * = $p < .05$; ** = $p < .01$; *** = $p < .001$